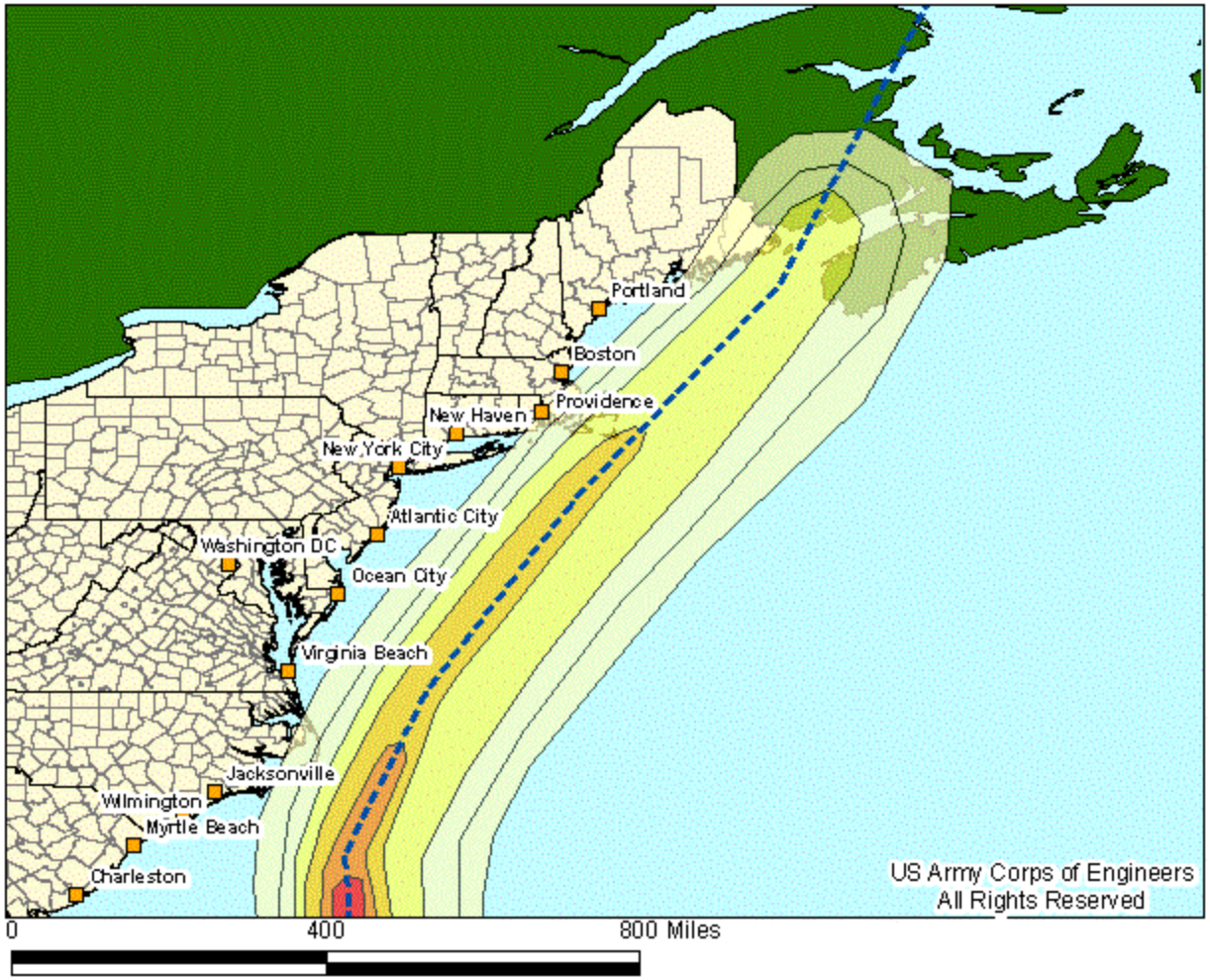
US Army Corps of Engineers

Hurricane Earl Projected Damage Areas

Landfall Expected In About 12 Hours

For Planning Purposes Only!



Post Landfall Projected Damage Areas

This model is based on a weakening Category 4 storm making several near strikes and possible landfalls east coast US.

Forecast Track
Historic Track

Projected Damage Areas

- CAT 0-type damage
- CAT 1-type damage
- CAT 2-type damage
- CAT 3-type damage
- CAT 4-type damage
- CAT 5-type damage

Information provided on this page displays a projected or actual Category 4 storm making landfall several near strikes and possible landfalls east coast US. These projections are based on information from the NHC (1100 EDT 09/02/2010) forecast and extrapolated by LRL staff to represent a landfall condition that has either occurred or may occur in the near future.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl
Projected Damage Areas

Generated By:
Siemsen, LRL 1130 EDT 09/02/2010

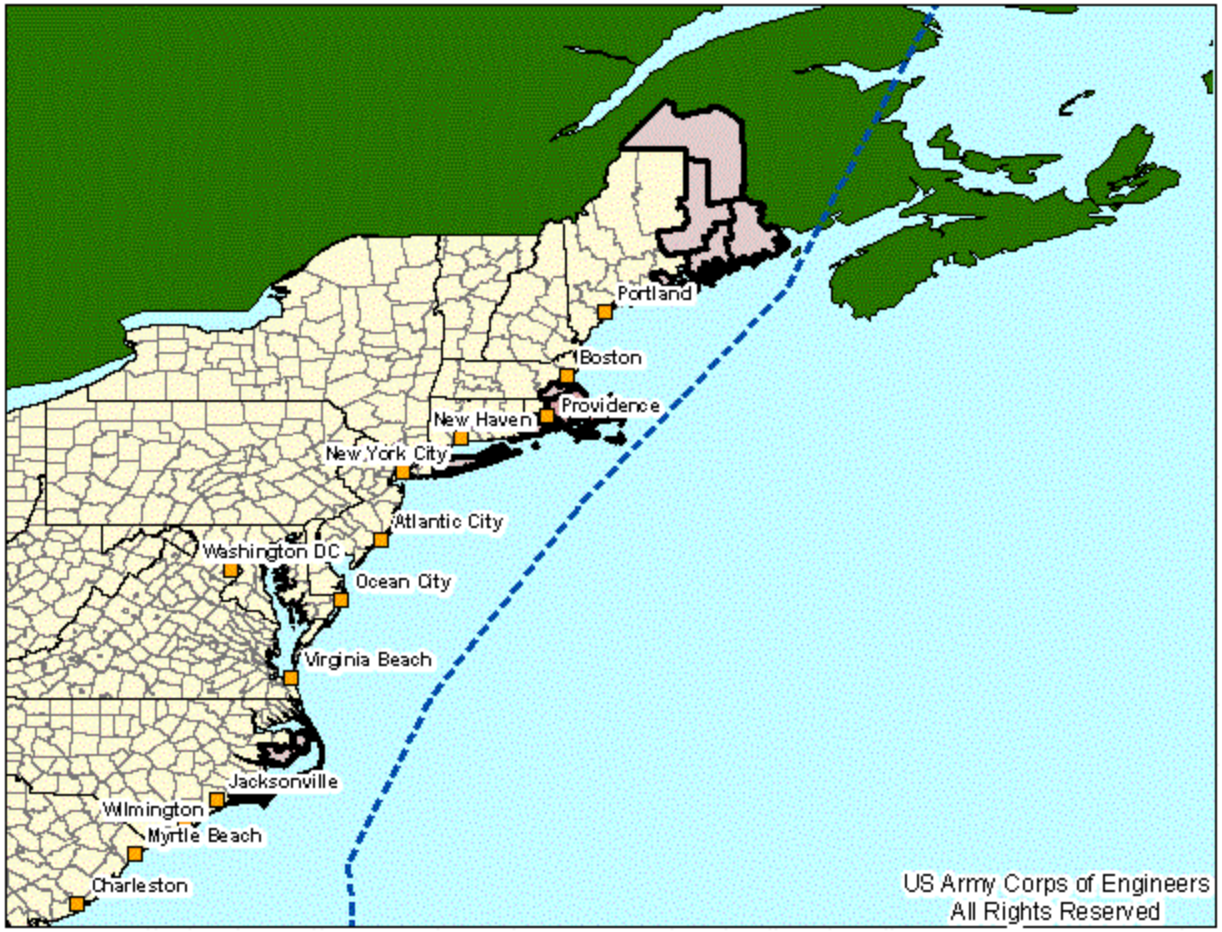
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Debris Model

Landfall Expected In About 12 Hours

For Planning Purposes Only!



Post Landfall Debris Model Results

Massachusetts - 773,000 Yards
Rhode Island - 90,000 Yards
Maine - 55,000 Yards
North Carolina - 21,000 Yards

Model results per County on following page

This model is based on a weakening Category 4 storm making several near strikes and possible landfalls east coast US.

Forecast Track
Historic Track

Debris

- < 100,000 cubic yards
- 100,000 - 249,999 cubic yards
- 250,000 - 499,999 cubic yards
- 500,000 - 999,999 cubic yards
- >1,000,000 cubic yards

Information provided on this page displays a Category 4 storm making landfall several near strikes and possible landfalls east coast US. These projections are based on information from the NHC (1100 EDT 09/02/2010) forecast. The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Debris Model	
Generated By: Siemsen, LRL 1130 EDT 09/02/2010	
Sources: HURREVAC LRL-DEBRIS	Page 2 of 15

US Army Corps of Engineers

Hurricane Earl Debris Model

Landfall Expected In About 12 Hours

For Planning Purposes Only!

State	Yards per State	County	Yards per County
Maine		Aroostook County	< 1,000
		Hancock County	19,000
		Knox County	< 1,000
		Penobscot County	< 1,000
		Washington County	36,000
Maine	55,000		
Massachusetts		Barnstable County	335,000
		Bristol County	205,000
		Dukes County	28,000
		Nantucket County	31,000
		Norfolk County	2,000
		Plymouth County	172,000
Massachusetts	773,000		
New York		Suffolk County	< 1,000
New York			
North Carolina		Carteret County	< 1,000
		Dare County	21,000
		Hyde County	< 1,000
North Carolina	21,000		
Rhode Island		Bristol County	22,000
		Kent County	3,000
		Newport County	37,000
		Washington County	28,000
Rhode Island	90,000		

The amount of debris forecasted is possible total volume, not necessarily the volume that may need to be removed with Federal funds, but does not include volume that may be covered by private insurance. Debris volume may include storm surge generated debris.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Earl Debris Model

Generated By:
Siemsen, LRL 1130 EDT 09/02/2010

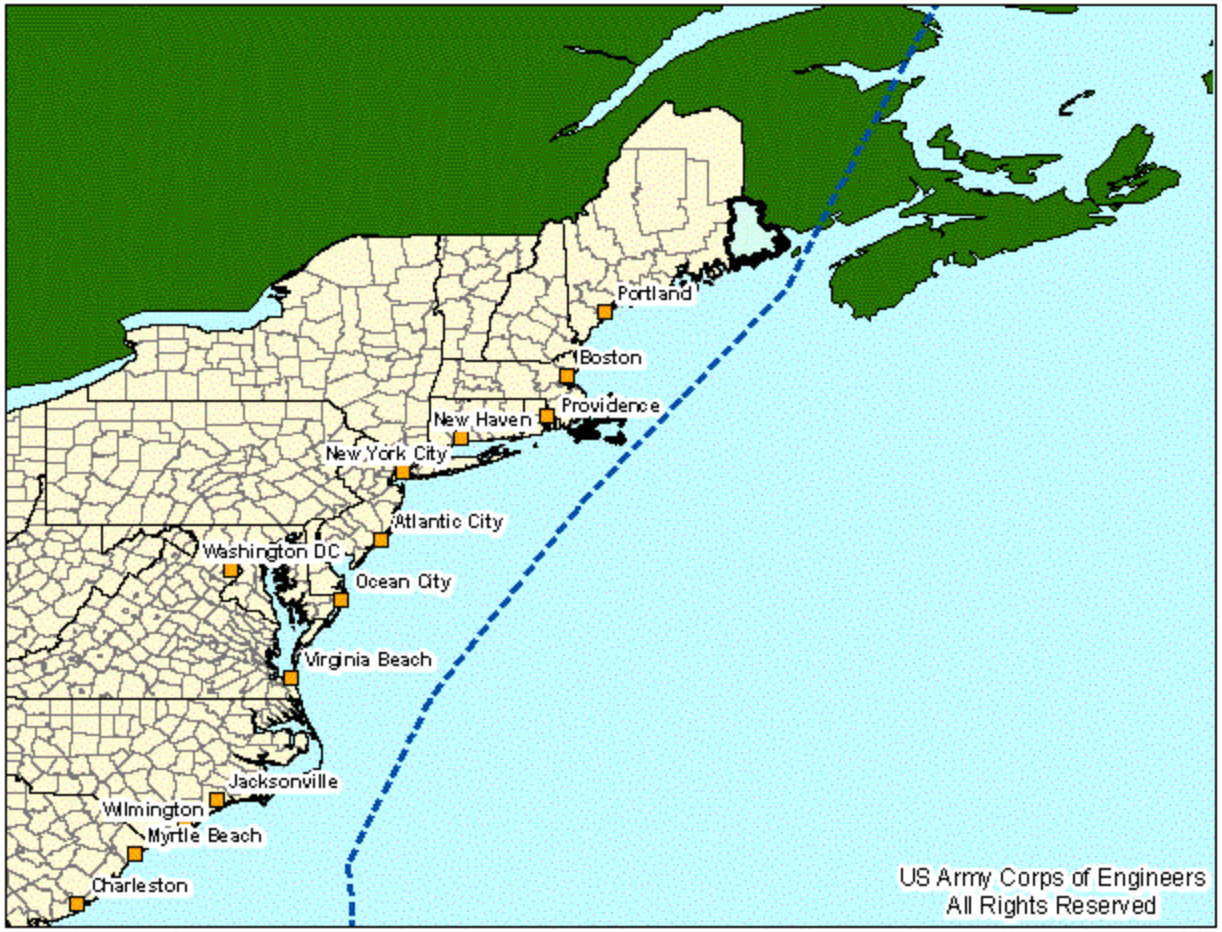
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Commodities Model

Landfall Expected In About 12 Hours

For Planning Purposes Only!



Post Landfall Water Model Results

Day One / Day Two / Day Three
Massachusetts – 3/6/11
Truckloads
Maine - 1 Truckload

Model results per County on following page

This model is based on a weakening Category 4 storm making several near strikes and possible landfalls east coast US.

Forecast Track
Historic Track

Commodities

- < 5 Trucks Each
- 5 - 10 Trucks Each
- 11 - 20 Trucks Each
- 21 - 40 Trucks Each
- > 40 Trucks Each

Information provided on this page displays a Category 4 storm making landfall several near strikes and possible landfalls east coast US. These projections are based on information from the NHC ***(1100 EDT 09/02/2010)*** forecast. The amount of commodities forecasted is based on Mission Guide Book requirements and SME input. The graphic represents daily needs with a ramp-up in the distribution system – three days for Points of Distribution (PODs) to be fully in place and operational. Volume shown is for each commodity – water and ice. Commodity need may be supplied by multiple agencies and/or sources.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Commodities Model	
Generated By: Siemsen, LRL 1130 EDT 09/02/2010	
Sources: HURREVAC LRL-DEBRIS	Page 4 of 15

US Army Corps of Engineers

Hurricane Earl Commodities Model

Landfall Expected In About 12 Hours

For Planning Purposes Only!

State	Truckloads per State	County	Truckloads per County
Maine		Washington County	1
Maine	1		
Massachusetts		Barnstable County	9
		Dukes County	1
		Nantucket County	1
Massachusetts	11		

Source: US Army Corps of Engineers, All Rights Reserved

The amount of commodities forecasted is based on Mission Guide Book requirements and SME input and the above table indicates suggested daily needs based on full deployment of a commodities distribution system. Volume shown is for each commodity – water and ice. Commodity need may be supplied by multiple agencies and/or sources.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Commodities Model

Generated By:
Siemsen, LRL 1130 EDT 09/02/2010

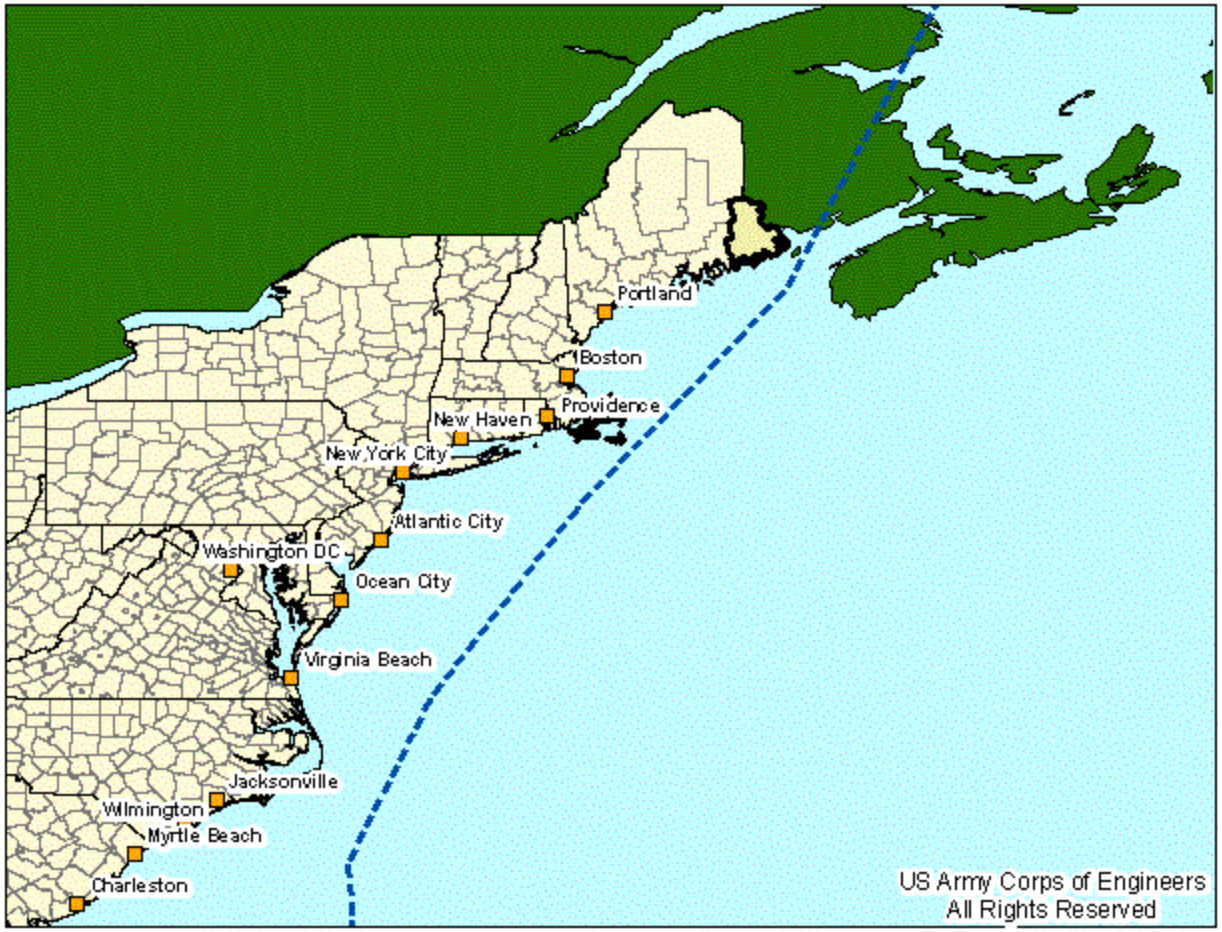
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Temporary Roofing Model

Landfall Expected In About 12 Hours

For Planning Purposes Only!



Post Landfall Temporary Roofing Model Results

Massachusetts - 1,900

Model results per County on following page

This model is based on a weakening Category 4 storm making several near strikes and possible landfalls east coast US.

Forecast Track

Historic Track

Temporary Roofing

- < 2,000 units
- 2,000 - 3,999 units
- 4,000 - 5,999 units
- 6,000 - 9,999 units
- > 10,000 units

Information provided on this page displays a Category 4 storm making landfall several near strikes and possible landfalls east coast US. These projections are based on information from the NHC (1100 EDT 09/02/2010) forecast. Temporary roofing is based on 3% in CAT 1, 6% in CAT 2, 9% in CAT 3 and 14% in CAT 4.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Roofing Model

Generated By:
Siemsen, LRL 1130 EDT 09/02/2010

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Temporary Roofing Model

Landfall Expected In About 12 Hours

For Planning Purposes Only!

State	House Units per State	County	House Units per County
Maine		Washington County	< 100
Maine			
Massachusetts		Barnstable County	1,500
		Dukes County	200
		Nantucket County	200
Massachusetts	1,900		

Temporary roofing is based on 3% in CAT 1, 6% in CAT 2, 9% in CAT 3 and 14% in CAT 4.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

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Hurricane Earl Roofing Model

Generated By:
Siemsen, LRL 1130 EDT 09/02/2010

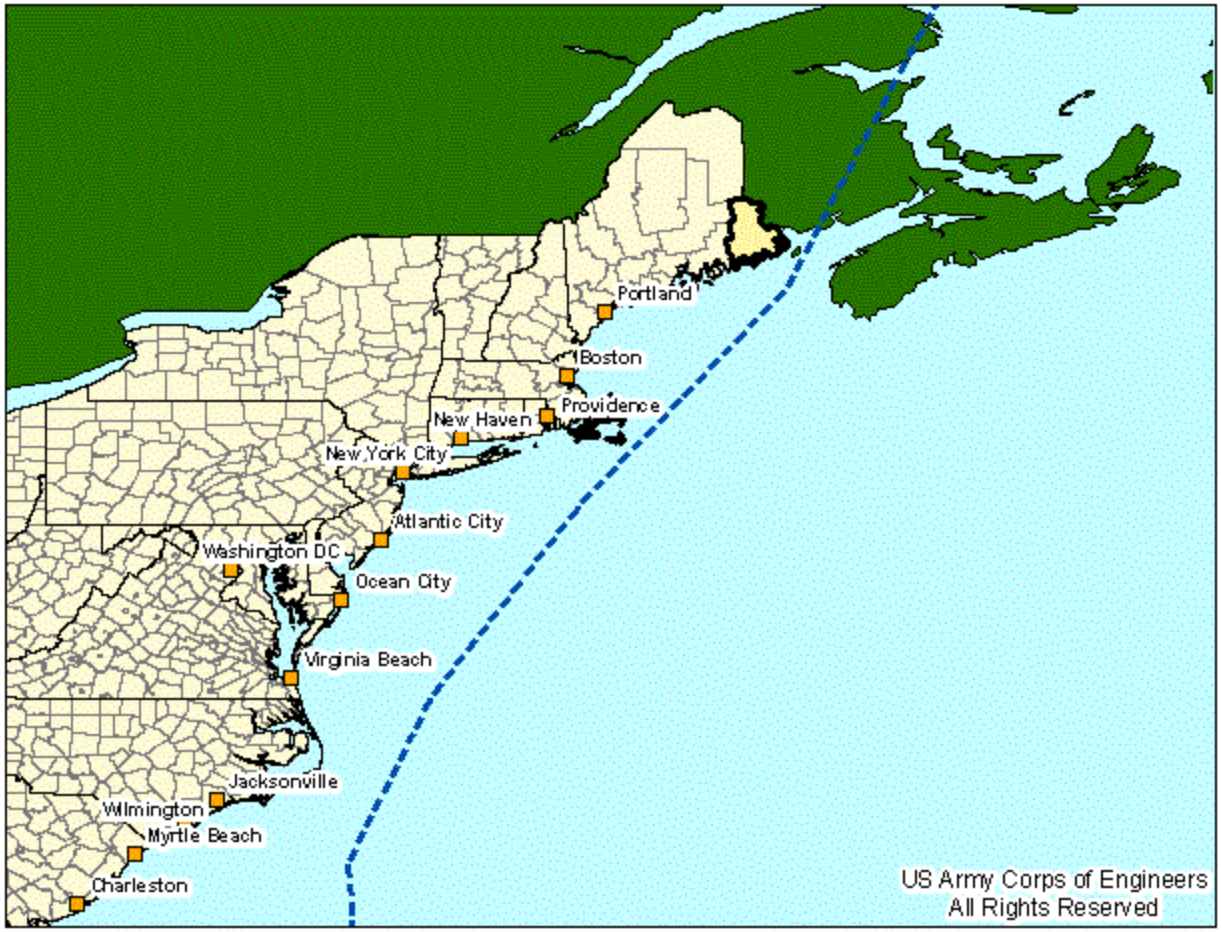
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Population Model

Landfall Expected In About 12 Hours

For Planning Purposes Only!



Post Landfall Population Model Results

Massachusetts - 146,000
Maine - 6,000

Model results per County on following page

This model is based on a weakening Category 4 storm making several near strikes and possible landfalls east coast US.

Forecast Track
Historic Track

Population

- < 25,000 persons
- 25,000 - 99,999 persons
- 100,000 - 174,999 persons
- 175,000 - 249,999 persons
- > 250,000 persons

Information provided on this page displays a Category 4 storm making landfall several near strikes and possible landfalls east coast US. These projections are based on information from the NHC (1100 EDT 09/02/2010) forecast. The numbers of persons included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2008 values).

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Population Model

Generated By:
Siemsen, LRL 1130 EDT 09/02/2010

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Population Model

Landfall Expected In About **12** Hours

For Planning Purposes Only!

State	Population per State	County	Population per County
Maine		Washington County	6,000
Maine	6,000		
Massachusetts		Barnstable County	123,000
		Dukes County	11,000
		Nantucket County	12,000
Massachusetts	146,000		

The number of persons estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2008 values.

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane Earl Population Model

Generated By:
Siemsen, LRL 1130 EDT 09/02/2010

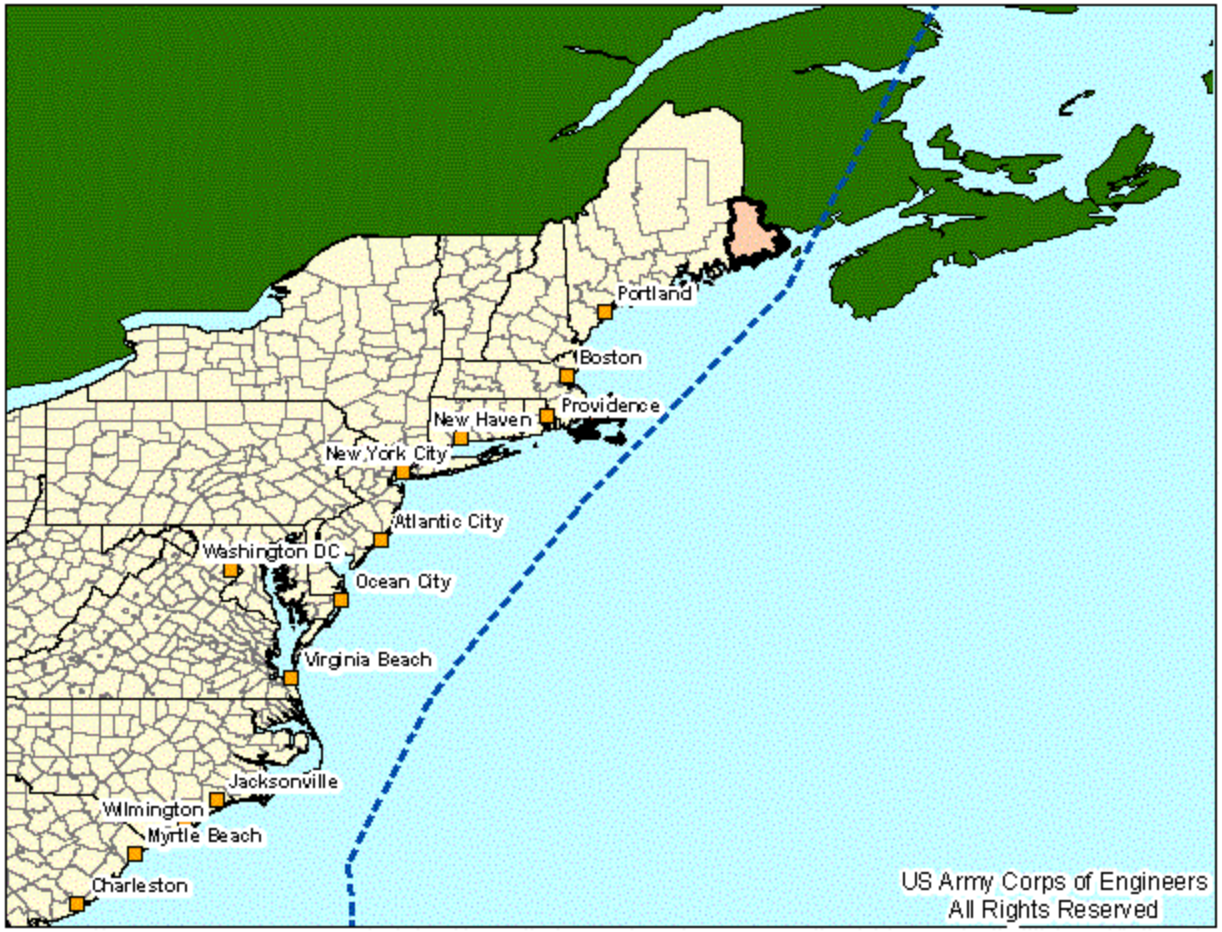
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Households Model

Landfall Expected In About 12 Hours

For Planning Purposes Only!



0 400 800 Miles

Post Landfall Households Model Results

Massachusetts - 65,000
Maine - 3,000

Model results per County on following page

This model is based on a weakening Category 4 storm making several near strikes and possible landfalls east coast US.

Forecast Track
Historic Track

Households

- < 7,500 households
- 7,500 - 14,999 households
- 15,000 - 24,999 households
- 25,000 - 49,999 households
- > 50000 households

Information provided on this page displays a Category 4 storm making landfall several near strikes and possible landfalls east coast US. These projections are based on information from the NHC (1100 EDT 09/02/2010) forecast. The numbers of households included in this model output are those that would be included within estimated hurricane force winds (Census 2000 values adjusted to July 2008 values).

Details about this model may be obtained at http://www.englink.usace.army.mil
or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Households Model

Generated By:
Siemsen, LRL 1130 EDT 09/02/2010

Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Households Model

Landfall Expected In About 12 Hours

For Planning Purposes Only!

State	Households per State	County	Households per County
Maine		Washington County	3,000
Maine	3,000		
Massachusetts		Barnstable County	55,000
		Dukes County	5,000
		Nantucket County	5,000
Massachusetts	65,000		

The number of households estimated to be within the hurricane force winds comes from Census 2000 values adjusted to July 2008 values.

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Source: US Army Corps of Engineers, All Rights Reserved

Hurricane [HurricaneName] [ModelName]

Generated By:
[Generator], LRL [DateTime]

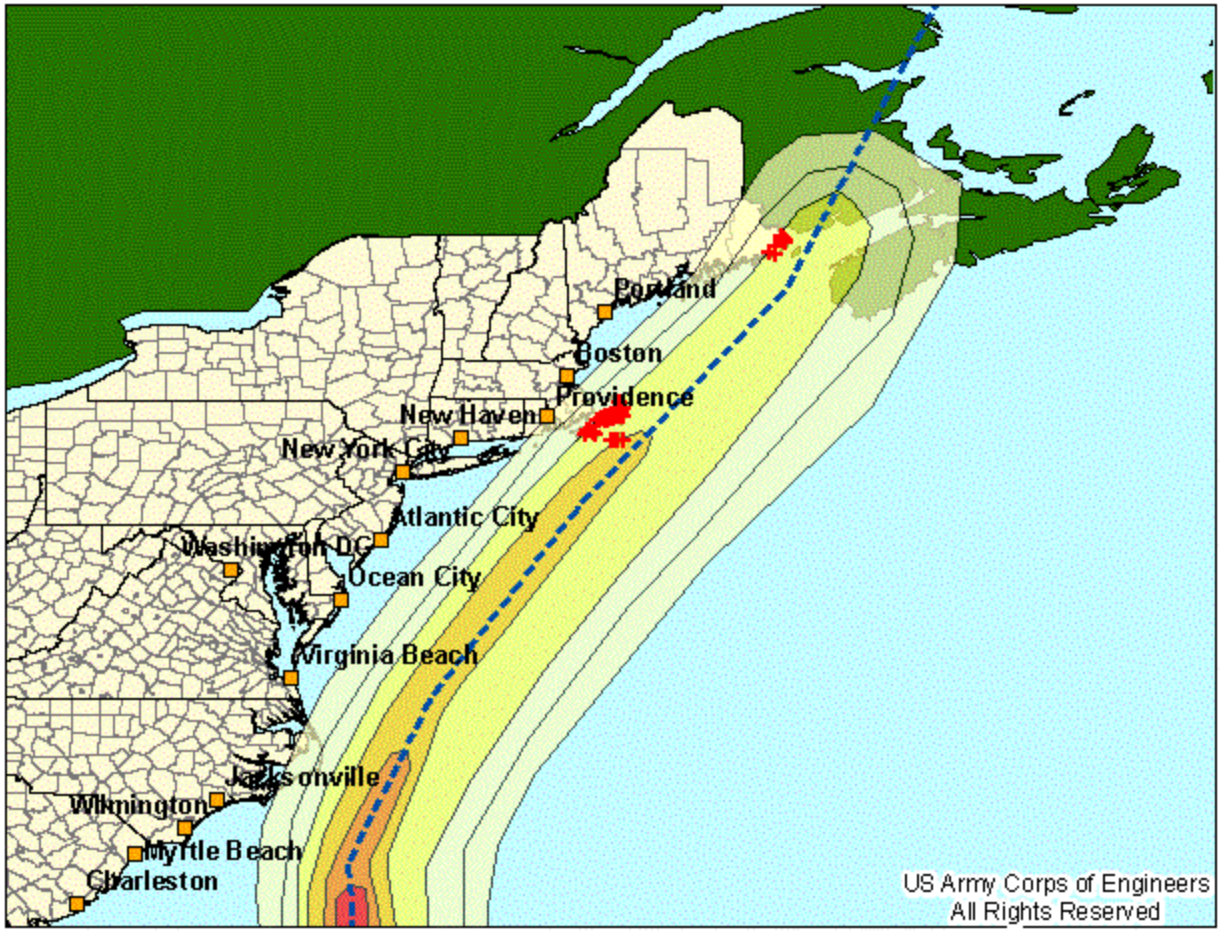
Sources:
HURREVAC
LRL-DEBRIS

US Army Corps of Engineers

Hurricane Earl Fire Stations

Landfall Expected In About 12 Hours

For Planning Purposes Only!



0 400 800 Miles

Most Probable Landfall Fire Stations Inside Hurricane Force Winds

Massachusetts - 31
Maine - 8

Model results per County on following page

This model is based on a weakening Category 4 storm making several near strikes and possible landfalls east coast US.

+ Fire Stations
Forecast Track
Historic Track

Information provided on this page displays a Category 4 storm making landfall several near strikes and possible landfalls east coast US. These projections are based on information from the NHC (1100 EDT 09/02/2010) forecast.

The number of fire stations included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2008).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

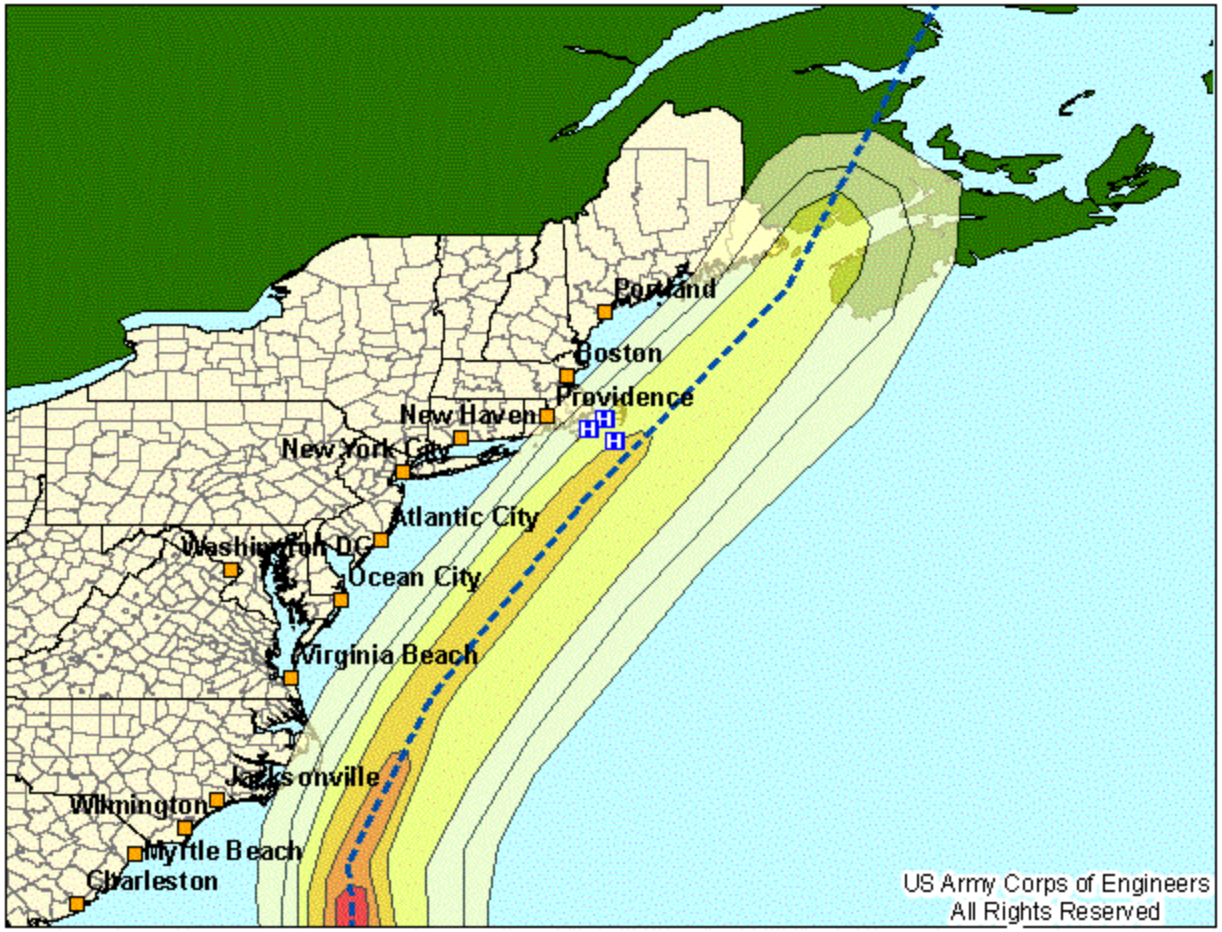
Hurricane Earl Fire Stations	
Generated By: Siemsen, LRL 1130 EDT 09/02/2010	
Sources: HURREVAC LRL-DEBRIS	Page 12 of 15

US Army Corps of Engineers

Hurricane Earl Hospitals

Landfall Expected In About 12 Hours

For Planning Purposes Only!



0 400 800 Miles

Most Probable Landfall Hospitals Inside Hurricane Force Winds

Massachusetts - 3

Model results per County on following page

This model is based on a weakening Category 4 storm making several near strikes and possible landfalls east coast US.

H Hospitals
Forecast Track
Historic Track

Information provided on this page displays a Category 4 storm making landfall several near strikes and possible landfalls east coast US. These projections are based on information from the NHC (1100 EDT 09/02/2010) forecast.

The number of hospitals included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2008).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

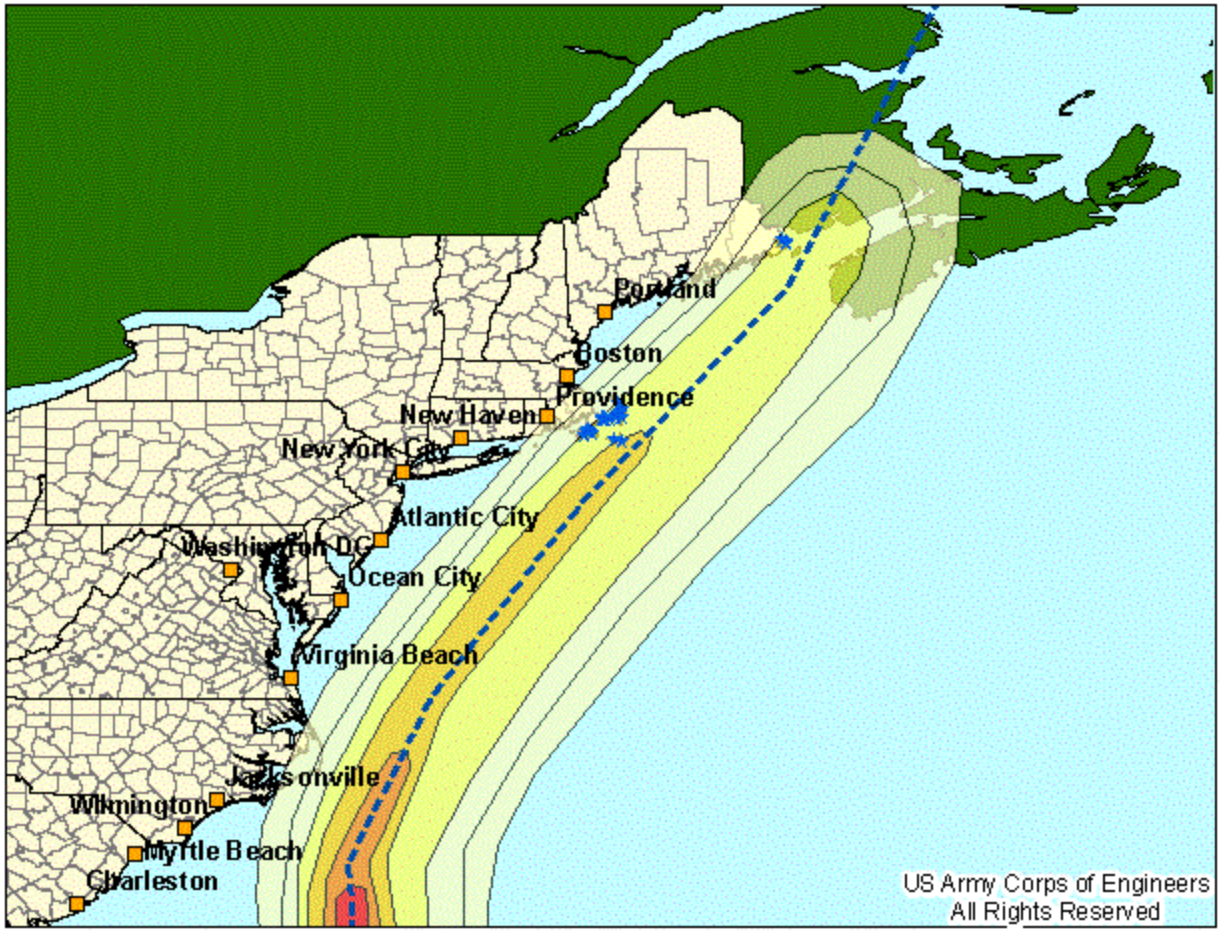
Hurricane Earl Hospitals	
Generated By: Siemsen, LRL 1130 EDT 09/02/2010	
Sources: HURREVAC LRL-DEBRIS	Page 13 of 15

US Army Corps of Engineers

Hurricane Earl Law Enforcement

Landfall Expected In About **12** Hours

For Planning Purposes Only!



Most Probable Landfall Law Enforcement Inside Hurricane Force Winds

Massachusetts - 25
Maine - 4

Model results per County on following page

This model is based on a weakening Category 4 storm making several near strikes and possible landfalls east coast US.

★ Law Enforcement
Forecast Track
Historic Track

Information provided on this page displays a Category 4 storm making landfall several near strikes and possible landfalls east coast US. These projections are based on information from the NHC (1100 EDT 09/02/2010) forecast.

The number of law enforcement included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2008).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

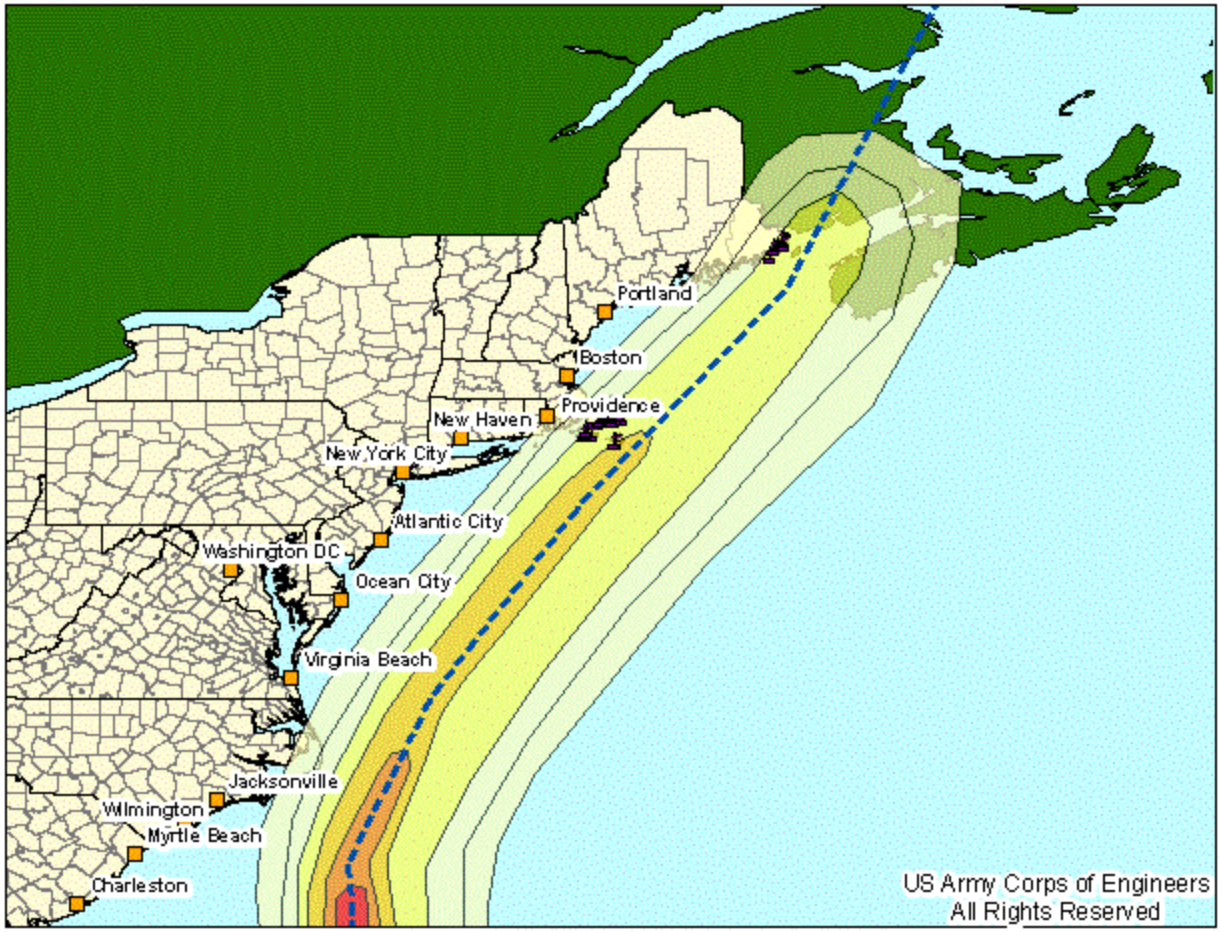
Hurricane Earl Law Enforcement	
Generated By: Siemsen, LRL 1130 EDT 09/02/2010	
Sources: HURREVAC LRL-DEBRIS	Page 14 of 15

US Army Corps of Engineers

Hurricane Earl Schools

Landfall Expected In About **12** Hours

For Planning Purposes Only!



0 400 800 Miles

Most Probable Landfall Schools Inside Hurricane Force Winds

Massachusetts - 57
Maine - 7

Model results per County on following page

This model is based on a weakening Category 4 storm making several near strikes and possible landfalls east coast US.

Schools
Forecast Track
Historic Track

Information provided on this page displays a Category 4 storm making landfall several near strikes and possible landfalls east coast US. These projections are based on information from the NHC (1100 EDT 09/02/2010) forecast.

The number of schools included in this output are those that would be included within estimated hurricane force winds (data source: HSIP Gold 2008).

Details about this model may be obtained at http://www.englink.usace.army.mil or contact Louisville District staff at DLL-CELRL-GIS@usace.army.mil

Hurricane Earl Schools	
Generated By: Siemsen, LRL 1130 EDT 09/02/2010	
Sources: HURREVAC LRL-DEBRIS	Page 15 of 15